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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An X-ray emitter comprising:
 - a. ~~an~~ an anode;
 - b. ~~a~~ a cathode;
 - c. ~~a~~ a vacuum evacuated body in which the anode and the cathode are placed;
 - d. ~~an~~ an opening in the body; and
 - e. ~~a~~ a high-voltage connector placed in the opening, the connector closing off the opening in a vacuum-tight manner;
 - f. ~~thereby subjecting wherein~~ the connector is subjected to a vacuum on ~~one~~ the side of the cathode and to ambient air on ~~an~~ the opposite side; and
wherein the outside of the vacuum evacuated body is subjected to atmospheric pressure and ambient air.
2. (original) The emitter according to claim 1 wherein the cathode is supported by the connector.
3. (original) The emitter according to claim 2 wherein the cathode is supported by the connector by means of an intermediate spacer.
4. (original) The emitter according to claim 1 wherein the body is made of metal.

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5. (original) The emitter according to claim 2 wherein the body is made of metal.
6. (original) The emitter according to claim 3 wherein the body is made of metal.
7. (original) The emitter according to claim 1 wherein the body comprises a material having an atomic number less than 82.
8. (original) The emitter according to claim 2 wherein the body comprises a material having an atomic number less than 82.
9. (original) The emitter according to claim 3 wherein the body comprises a material having an atomic number less than 82.
10. (original) The emitter according to claim 4 wherein the body comprises a material having an atomic number less than 82.
11. (original) The emitter according claim 1 wherein the body comprises a cylindrical portion forming the opening, the connector being placed and fastened into the cylindrical portion.
12. (original) The emitter according claim 2 wherein the body comprises a cylindrical portion forming the opening, the connector being placed and fastened into the cylindrical portion.

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13. (original) The emitter according claim 3 wherein the body comprises a cylindrical portion forming the opening, the connector being placed and fastened into the cylindrical portion.

14. (original) The emitter according claim 4 wherein the body comprises a cylindrical portion forming the opening, the connector being placed and fastened into the cylindrical portion.

15. (original) The emitter according claim 5 wherein the body comprises a cylindrical portion forming the opening, the connector being placed and fastened into the cylindrical portion.

16. (original) The emitter according to claim 1 wherein the connector is made from a ceramic.

17. (original) The emitter according to claim 2 wherein the connector is made from a ceramic.

18. (original) The emitter according to claim 3 wherein the connector is made from a ceramic.

19. (original) The emitter according to claim 4 wherein the connector is made from a ceramic.

20. (original) The emitter according to claim 5 wherein the connector is made from a ceramic.

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21. (original) The emitter according to claim 6 wherein the connector is made from a ceramic.

22. (original) The emitter according to claim 1 wherein the connector is made from an electrically insulating oxide.

23. (original) The emitter according to claim 2 wherein the connector is made from an electrically insulating oxide.

24. (canceled)

25. (original) The emitter according to claim 3 wherein the connector is made from an electrically insulating oxide.

26. (original) The emitter according to claim 4 wherein the connector is made from an electrically insulating oxide.

27. (original) The emitter according to claim 5 wherein the connector is made from an electrically insulating oxide.

28. (original) The emitter according to claim 6 wherein the connector is made from an electrically insulating oxide.

29. (original) The emitter according to claim 7 wherein the connector is made from an electrically insulating oxide.

30. (original) The emitter according to claim 7 wherein the connector comprises aluminum.

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31. (original) The emitter according to claim 8 wherein the connector comprises aluminum.

32. (original) The emitter according to claim 9 wherein the connector is aluminum based.

33. (original) The emitter according to claim 9 wherein the connector is aluminum based.

34. (original) The emitter according to claim 9 wherein the connector is aluminum nitride-based.

35. (original) The emitter according to claim 9 wherein the connector is aluminum nitride-based.

36. (currently amended) An X-ray apparatus comprising:

a. — an X-ray emitter comprising:

(1) — an anode;

(2) — a cathode (30);

(3) — a vacuum evacuated body (16) in which the anode and the cathode are placed;

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(4)—an opening in (19a) the body; and
(5)—a high-voltage connector ~~(25)~~ placed in the opening, the connector closing off the opening in a vacuum-tight manner;
(6)—~~thereby subjecting wherein~~ the connector is subjected to a vacuum on ~~one~~ the side of the cathode and to ambient air on ~~an~~ the opposite side;
wherein the outside of the vacuum evacuated body is subjected to atmospheric pressure and ambient air; and

b.——means for receiving the X-rays and capable of supplying an output signal representative of an object placed in the path of the X-rays.

37. (original) The apparatus according to claim 36 wherein the connector is made of an insulating oxide.

38. (currently amended) A method of manufacturing an X-ray emitter comprising:

a.——providing a body capable of being made vacuum-tight;
b.——forming an opening in the body;
c.——placing an anode and a cathode in the body;
d.——placing a high-voltage connector in the body;
e.——fastening the connector into the opening, the connector closing off the opening in a vacuum-tight manner; and
f.——evacuating the body so that the body is subjected to a vacuum on the side of the cathode and to atmospheric pressure ~~or~~ and ambient air on the opposite side.

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39. (original) The emitter according to claim 38 wherein the connector is made from an electrically insulating oxide.

40. (new) The emitter of Claim 1, wherein:
the connector has a generally cylindrical external wall that is securely fastened in a vacuum-tight manner to a generally cylindrical portion of the vacuum evacuated body.